

## INTISARI

PLTU Jawa 9&10 di Cilegon, Banten, dibangun sesuai Perpres No. 4/2016 dengan kontraktor utama PT. Hutama Karya dan PT. Doosan Heavy Industry. Proyek ini mengalami kegagalan struktur CWPH akibat desain secant pile yang tidak mampu menahan tekanan tanah, sehingga menyebabkan rework dan keterlambatan. Perubahan desain secant pile tersebut menyebabkan biaya membengkak, waktu melampaui SPMK, dan progress tertunda.

Penelitian ini bertujuan untuk menghitung berapa Cost Performance Index (CPI) dan Duration Performance Index (DPI) dan untuk mengetahui evaluasi yang diperlukan sebagai masukan untuk proyek di masa mendatang.

Berdasarkan hasil Analisis Earned Value Management menunjukkan rata-rata  $CPI < 1$ , menandakan biaya aktual lebih besar dari nilai pekerjaan. Analisis Earned Duration Management mencatat BPD: 169 hari, TPD: 235 hari, TED: 263 hari, dengan  $DPI > 1$ , menunjukkan durasi waktu tidak sesuai rencana. Evaluasi: Pastikan desain dan lahan final 100%, percepat review desain, akurasi RAB, jadwal, dan laporan proyek. Perencanaan waktu dan biaya perlu mempertimbangkan risiko untuk meminimalkan deviasi dari target.

**Kata kunci:** EVM, EDM, CPI, DPI, analisis, biaya, waktu

## ***ABSTRACT***

*PLTU Jawa 9&10 in Cilegon, Banten, is being built in accordance with Presidential Regulation No. 4/2016 with the main contractors PT. Hutama Karya and PT. Doosan Heavy Industry. The project experienced structural failure in the CWPH due to the secant pile design, which was unable to withstand the pressure from the soil, leading to rework and delays. The change in the secant pile design resulted in increased costs, extended time beyond the SPMK, and delayed progress.*

*This study aims to calculate the Cost Performance Index (CPI) and Duration Performance Index (DPI) and to identify the necessary evaluations as input for future projects.*

*Based on the Earned Value Management analysis, the average CPI is  $<1$ , indicating that actual costs exceeded the value of work performed. The Earned Duration Management analysis recorded BPD: 169 days, TPD: 235 days, TED: 263 days, with  $DPI >1$ , showing that the project duration did not align with the planned schedule. Evaluation: Ensure final 100% design and land, accelerate design reviews, accuracy of RAB, schedule, and project reports. Time and cost planning should consider risks to minimize deviations from the target.*

***Keywords:*** EVM, EDM, CPI, DPI, analysis, cost, time